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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,077	03/12/2004	Ramachandra Reddy	VASG-P01-001	2078
28120	7590	10/31/2006	EXAMINER	
FISH & NEAVE IP GROUP ROPES & GRAY LLP ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624			CHONG, KIMBERLY	
			ART UNIT	PAPER NUMBER
			1635	

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/800,077	Applicant(s) REDDY ET AL.	
	Examiner Kimberly Chong	Art Unit 1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-11,13-25,30-59,61-83 and 88-91 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-11,13,14 and 59 is/are rejected.
- 7) ☒ Claim(s) 15-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/7/06, 9/14/06, 9/22/06</u> | 6) <input checked="" type="checkbox"/> Other: <u>attached alignment</u> |

DETAILED ACTION

Status of Application/Amendment/Claims

Applicant's response filed 08/07/2006 has been considered. Rejections and/or objections not reiterated from the previous office action mailed 04/03/2006 are hereby withdrawn. The following rejections and/or objections are either newly applied or are reiterated and are the only rejections and/or objections presently applied to the instant application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

With entry of the amendment filed on 08/07/2006, claims 1, 3, 5-11, 13-25, 30-59, 61-83, 88-91 are pending, claims 1, 3, 5-11, 13-17 and 59 are currently under examination, claims 2, 4, 12, 26-29 and 60 have been canceled and claims 18-58, 61-83 and 88-91 are withdrawn as being drawn to a non-elected invention.

Response to Applicant's arguments filed 08/07/2006 are moot in view of the new grounds of rejections below.

Election/Restrictions

Applicants continue to traverse the restriction requirement and reiterate the arguments already made of record. Applicants state the claimed invention relates to a genus of nucleic acid compounds that decrease the expression of EphB4 in a cell rather than a species. Applicants argue it is "in appropriate for the Examiner to restrict the claimed invention to an un-recited species in a genus claim.

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As stated in the previous Office action filed 04/03/2006, the restriction requirement was made FINAL for the reasons of record. Further, the requirement to elect a single sequences was *not* a requirement to elect a species, as was specifically stated in the Office action filed 10/21/2005. The restriction requirement to elect a single sequence was because a search of more than one sequence would present an undue burden on the Patent and Trademark Office due to the complex nature of the search *and* corresponding examination of more than one sequence. Therefore, the requirement is still deemed proper and is therefore remains FINAL.

Claim Objections

Claims 15-17 are objected to as being dependent upon a rejected base claim and reciting non-elected subject matter, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and deleting non-elected subject matter.

Claim Rejections - 35 USC § 102 or 35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5-7, 9-11, 13 and 59 are rejected under 35 U.S.C. 102(b) or 35 U.S.C. 103(a) as being anticipated by or obvious over Bennett et al. (Patent No: 6,277,640).

The claims are drawn to an isolated nucleic acid compound comprising at least a portion that is complementary to at least 15 contiguous nucleotides of an EphB4 transcript, wherein the EphB4 transcript has a nucleotide sequence set forth in SEQ ID NO: 392, wherein the nucleic acid compound comprises a nucleotide sequence that is complementary to a region consisting of not more than 500 nucleotides of SEQ Id NO: 392, wherein the nucleic acid compound is from about 15 to about 75 nucleotides in length, wherein the compound is single-stranded, a DNA molecule, a RNA molecule or DNA strand and an RNA strand modified or is an antisense nucleic acid, wherein the compound comprises one modified backbone or base moieties, wherein the compound has at least one internucleotide linkage, wherein the compound comprises at least one 2'-O-alkylated ribonucleotide and drawn to pharmaceutical composition comprising said nucleic acid compound.

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Bennett et al. teach an antisense compound, 18 nucleobases in length, that is complementary to at least 15 contiguous nucleotides of EphB4 set forth in SEQ ID NO: 392 (see attached sequence alignment and SEQ ID NO: 94). Bennett et al. teach the compound is single-stranded, a DNA molecule or a RNA molecule (see column 5, lines 35-45), wherein the compound comprises one modified backbone or base moieties, wherein the compound has at least one internucleotide linkage, wherein the compound comprises at least one 2'-O-alkylated ribonucleotide (see columns 7-8). Bennett et al. teach pharmaceutical compositions comprising said nucleic acid compounds (see column 12, lines 30-65).

Therefore, the nucleic acid sequence taught by Bennett *et al.* meets the structural limitation of claims 1, 3, 5-7, 9-11, 13 and 59 of the instant application and would be expected to hybridize to a nucleic acid encoding of EphB4 and decrease expression of EphB4 in a cell. See, for example, MPEP 2112, which states "[w]here applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under 35 U.S.C. 102." *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). This same rationale should also apply to product, apparatus, and process claims claimed in terms of function, property or characteristic.

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Although Bennett et al. does not explicitly disclose said antisense compound would decrease the expression of EphB4 in cells, the antisense compound taught by Bennett et al. is structurally identical to the claimed nucleic acid compound and therefore the claimed function of decreasing the expression of EphB4 would be an inherent property. The instantly claimed antisense compound is required to have at least a portion that is complementary to at least 15 contiguous nucleotides of an EphB4 transcript and thus decrease expression of EphB4. Bennett et al. teach antisense compounds wherein at least 15 contiguous nucleotides are complementary to the open reading frame of EphB4 having SEQ ID NO. 392 and Bennett et al teach that an antisense compound that hybridizes effectively to the open reading frame of a target gene would function to interfere with expression of said target gene (see columns 3 and 4). Bennett et al. further state antisense compounds are routinely used as therapeutic agents to interfere with expression from target nucleic acids in cells.

Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims and the instant claims are anticipated or is obvious over Bennett et al.

Claims 1, 3, 5-8, 10-11, 13 and 59 are rejected under 35 U.S.C. 102(e) or 35 U.S.C. 103(a) as being anticipated by or obvious over Khvorova et al. (US 2005/0246794).

The claims are drawn to an isolated nucleic acid compound comprising at least a portion that hybridizes to an EphB4 transcript, wherein the EphB4 transcript has a

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nucleotide sequence set forth in SEQ ID NO: 392, wherein the nucleic acid compound comprises a nucleotide sequence that is complementary to a region consisting of n more than 500 nucleotides of SEQ ID NO: 392, wherein the region has at least 8 contiguous nucleotides of the SEQ ID NO: 392, wherein the nucleic acid compound is from about 15 to about 75 nucleotides in length, wherein the compound is single-stranded, double-stranded, a DNA molecule, a RNA molecule or DNA strand and an RNA strand modified or is an antisense nucleic acid, wherein the compound comprises one modified backbone or base moieties, wherein the compound has at least one internucleotide linkage, wherein the compound comprises at least one 2'-O-alkylated ribonucleotide, wherein the compound is an enzymatic nucleic acid, wherein the enzymatic compound is a ribozyme, wherein the enzymatic nucleic acid is a DNA enzyme and drawn to pharmaceutical composition comprising said nucleic acid compound.

Khvorova et al. teach a dsRNA compound, 19 nucleobases in length that is complementary to at least 15 contiguous nucleotides of EphB4 set forth in SEQ ID NO: 392 (see attached sequence alignment and SEQ ID NO: 4253). Khvorova et al. teach the compound is single-stranded that can form a hairpin loop or a double-stranded RNA molecule (see paragraph 0109), wherein the compound comprises one modified backbone or base moieties, wherein the compound has at least one internucleotide linkage, wherein the compound comprises at least one 2'-O-alkylated ribonucleotide (see paragraphs 0136-0138). Khvorova et al. teach pharmaceutical compositions comprising said nucleic acid compounds (see paragraphs 0316). Therefore, the nucleic

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acid sequence taught by Khvorova *et al.* meets the structural limitation of claims 1, 3, 5-8, 10-11, 13 and 59 of the instant application and would be expected to hybridize to a nucleic acid encoding of EphB4. See, for example, MPEP 2112, which states "[w]here applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under 35 U.S.C. 102." *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). This same rationale should also apply to product, apparatus, and process claims claimed in terms of function, property or characteristic. Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims.

Although Khvorova *et al.* does not explicitly disclose said antisense compound would decrease the expression of EphB4 in cells, the antisense compound taught by Khvorova *et al.* is structurally identical to the claimed nucleic acid compound and therefore the claimed function of decreasing the expression of EphB4 would be an inherent property. The instantly claimed antisense compound is required to have at least a portion that is complementary to at least 15 contiguous nucleotides of an EphB4 transcript and thus decrease expression of EphB4. Khvorova *et al.* teach said nucleic acid compound binds to a target gene and attenuate the expression from said nucleic acid target (see column 5-6) that a nucleic acid compound comprises an antisense compound that contains a region that specifically binds to a target nucleic acid and has

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RNA cleavage enzymatic activity to effectively inhibit nucleic acid expression of a target gene (see column 4).

Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims and the instant claims are anticipated or is obvious over Khvorova et al.

Claims 1, 3, 5-11, 13 and 59 are rejected under 35 U.S.C. 102(e) or 35 U.S.C. 103(a) as being anticipated by or obvious over Robbins et al. (Patent No: 6,770,633).

The claims are drawn to an isolated nucleic acid compound comprising at least a portion that hybridizes to an EphB4 transcript, wherein the EphB4 transcript has a nucleotide sequence set forth in SEQ ID NO: 392, wherein the nucleic acid compound comprises a nucleotide sequence that is complementary to a region consisting of n more than 500 nucleotides of SEQ ID NO: 392, wherein the region has at least 8 contiguous nucleotides of the SEQ ID NO: 392, wherein the nucleic acid compound is from about 15 to about 75 nucleotides in length, wherein the compound is single-stranded, double-stranded, a DNA molecule, a RNA molecule or DNA strand and an RNA strand modified or is an antisense nucleic acid, wherein the compound comprises one modified backbone or base moieties, wherein the compound has at least one internucleotide linkage, wherein the compound comprises at least one 2'-O-alkylated ribonucleotide, wherein the compound is an enzymatic nucleic acid, wherein the enzymatic compound is a ribozyme, wherein the enzymatic nucleic acid is a DNA

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enzyme and drawn to pharmaceutical composition comprising said nucleic acid compound.

Robbins et al. teach a compound, 19 nucleobases in length that is complementary to at least 15 contiguous nucleotides of EphB4 set forth in SEQ ID NO: 392 (see attached sequence alignment and SEQ ID NO: 4253). Robbins et al. teach the compound is single-stranded, double-stranded, a DNA molecule or a RNA molecule (see Figure 6 and column 7 lines 15-35), wherein the compound comprises one modified backbone or base moieties, wherein the compound has at least one internucleotide linkage, wherein the compound comprises at least one 2'-O-alkylated ribonucleotide (see columns 5, lines 4-34). Robbins et al. teach pharmaceutical compositions comprising said nucleic acid compounds (see columns 9-10). Therefore, the nucleic acid sequence taught by Robbins *et al.* meets the structural limitation of claims 1, 3, 5-11, 13 and 59 of the instant application and would be expected to hybridize to a nucleic acid encoding of EphB4. See, for example, MPEP 2112, which states "[w]here applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103. and for anticipation under 35 U.S.C. 102." *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). This same rationale should also apply to product, apparatus, and process claims claimed in terms of function, property or characteristic.

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Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims.

Although Robbins et al. does not explicitly disclose said antisense compound would decrease the expression of EphB4 in cells, the antisense compound taught by Robbins et al. is structurally identical to the claimed nucleic acid compound and therefore the claimed function of decreasing the expression of EphB4 would be an inherent property. The instantly claimed antisense compound is required to have at least a portion that is complementary to at least 15 contiguous nucleotides of an EphB4 transcript and thus decrease expression of EphB4. Robbins et al. teach antisense compounds wherein at least 15 contiguous nucleotides are complementary to the open reading frame of EphB4 having SEQ ID NO. 392 and Robbins et al. teach that a nucleic acid compound comprises an antisense compound that contains a region that specifically binds to a target nucleic acid and has RNA cleavage enzymatic activity to effectively inhibit nucleic acid expression of a target gene (see column 4).

Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims and the instant claims are anticipated or is obvious over Robbins et al.

Claims 1, 3 and 14 are rejected under 35 U.S.C. 102(e) or 35 U.S.C. 103(a) as being anticipated by or obvious over Venter et al. (Patent No: 6,812,339).

The claims are drawn to an isolated nucleic acid compound comprising at least a portion that hybridizes to an EphB4 transcript, wherein the EphB4 transcript has a

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nucleotide sequence set forth in SEQ ID NO: 392, wherein the nucleic acid compound comprises a nucleotide sequence that is complementary to a region consisting of more than 500 nucleotides of SEQ ID NO: 392, wherein the region has at least 8 contiguous nucleotides of the SEQ ID NO: 392, wherein the antisense nucleic acid compound comprises a sequence having SEQ ID NO. 231.

Venter et al. teach a nucleic acid sequence, 601 nucleobases in length that is complementary to at 20 nucleotides of EphB4 set forth in SEQ ID NO: 392 (see attached sequence alignment). The specification at page 23 discloses an antisense is a non-enzymatic nucleic acid sequence that binds to a target nucleic acid and does not disclose a size limitation for the instantly claimed antisense compound. Therefore, the nucleic acid sequence taught by Venter *et al.* meets the structural limitation of claims 1, 3 and 14 of the instant application and would be expected to hybridize to a nucleic acid encoding of EphB4. See, for example, MPEP 2112, which states “[w]here applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection: “There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under 35 U.S.C. 102.” *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). This same rationale should also apply to product, apparatus, and process claims claimed in terms of function, property or characteristic. Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims.

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Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims and the instant claims are anticipated or is obvious over Venter et al.

Response to Applicant's Arguments

Claim Rejections - 35 USC § 112

The rejection of record of claim 29 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been withdrawn in response to claim amendments filed 08/07/2006.

Re: Claim Rejections - 35 USC § 102 or 35 USC § 103

The rejection of record of claims 1-7, 9-13 and 59-60 under 35 U.S.C. 102(b) or 35 U.S.C. 103(a) as being anticipated by or obvious over Bennett *et al.* has been withdrawn in response to claim amendments filed 08/07/2006.

The rejection of record of claims 1-13, 26-29 and 59-60 under 35 U.S.C. 102(b) or 35 U.S.C. 103(a) as being anticipated by or obvious over Pavco *et al.* (Patent No: 6,346,398) has been withdrawn in response to claim amendments filed 08/07/2006.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Chong whose telephone number is 571-272-3111. The examiner can normally be reached Monday thru Thursday between 6 and 3 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Paras can be reached at 571-272-4517. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

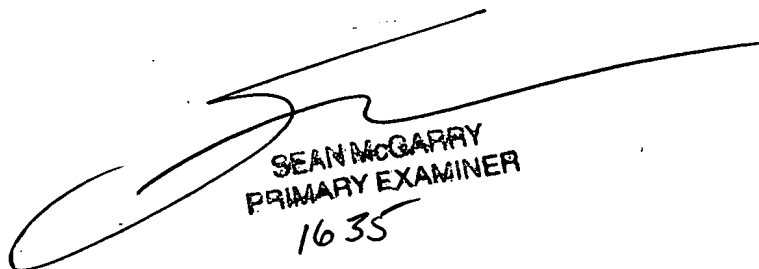
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application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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Kimberly Chong
Examiner
Art Unit 1635


SEAN MCGARRY
PRIMARY EXAMINER
1635

RESULT 4
US-09-593-711A-41
Sequence 41, Application US/09593711A
Patent No. 6271030
GENERAL INFORMATION:
APPLICANT: Brett P. Monia
APPLICANT: Madeline W. Butler
TITLE OF INVENTION: ANTISENSE MODULATION OF C/EBP BETA EXPRESSION
FILE REFERENCE: RTS-0118
CURRENT APPLICATION NUMBER: US/09/593,711A
CURRENT FILING DATE: 2000-06-14
NUMBER OF SEQ ID NOS: 244
SEQ ID NO 41
LENGTH: 20
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Antisense oligonucleotide
US-09-593-711A-41

Query Match 0.4%; Score 17.4; DB 1; Length 20;
Best Local Similarity 94.7%; Pred. No. 18;
Matches 18; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 214 GCCGCCGCCGCCGTCGCCG 232
DB 1 GCCGCCGCCGCCGCCGCCG 19

RESULT 5
US-09-226-012-91/c
Sequence 91, Application US/09226012
Patent No. 6207383
GENERAL INFORMATION:
APPLICANT: Keating, Mark T.
APPLICANT: Splawski, Igor
TITLE OF INVENTION: MUTATIONS IN AND GENOMIC STRUCTURE OF HERG - A LONG QT
FILE REFERENCE: 2323-136
CURRENT APPLICATION NUMBER: US/09/226,012
CURRENT FILING DATE: 1999-01-06
EARLIER APPLICATION NUMBER: 09/122,847
EARLIER FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 116
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 91
LENGTH: 21
TYPE: DNA
ORGANISM: Homo sapiens
US-09-226-012-91

Query Match 0.4%; Score 16.8; DB 1; Length 21;
Best Local Similarity 90.0%; Pred. No. 26;
Matches 18; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 2018 GTCTGCTCTGCTCTCTGCTG 2037
DB 20 GTCTGCTCTGCTCTCTGCTG 1

RESULT 6
US-09-630-706-22/c
Sequence 22, Application US/09630706
Patent No. 6277640
GENERAL INFORMATION:
APPLICANT: C. Frank Bennett
APPLICANT: Lex M. Cowgett
TITLE OF INVENTION: ANTISENSE MODULATION OF HER-3 EXPRESSION
FILE REFERENCE: RTS-0053
CURRENT APPLICATION NUMBER: US/09/630,706
CURRENT FILING DATE: 2000-08-01
NUMBER OF SEQ ID NOS: 94

SEQ ID NO 22
LENGTH: 18
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Antisense oligonucleotide
US-09-630-706-22

Query Match 0.4%; Score 16.4; DB 1; Length 18;
Best Local Similarity 94.4%; Pred. No. 22;
Matches 17; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 105 ACCCCACTCCAGCCAGC 122
DB 16 ACCCCACTCCAGCCAGC 1

RESULT 7
US-09-475-947A-333
Sequence 333, Application US/09475947A
Patent No. 6472154
GENERAL INFORMATION:
APPLICANT: Garner, Harold R.
APPLICANT: Wren, Jonathan D.
APPLICANT: Minna, John D.
TITLE OF INVENTION: Polymorphic Repeats in Human Genes
FILE REFERENCE: UTS00667
CURRENT APPLICATION NUMBER: US/09/475,947A
CURRENT FILING DATE: 1999-12-31
NUMBER OF SEQ ID NOS: 346
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 333
LENGTH: 18
TYPE: DNA
ORGANISM: human
US-09-475-947A-333

Query Match 0.4%; Score 16.4; DB 1; Length 18;
Best Local Similarity 94.4%; Pred. No. 22;
Matches 17; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1069 GCCCCAGCCGCCAGCCTC 1086
DB 1 GCCCCAGCTCCAGCCTC 18

RESULT 8
US-08-204-697-6/c
Sequence 6, Application US/08204697
Patent No. 5648482
GENERAL INFORMATION:
APPLICANT: Meyer, Urs A
TITLE OF INVENTION: DETECTION OF POOR METABOLIZERS OF DRUGS
NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
COUNTRY: U.S.
ZIP: 07110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/204,697
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/716,500
FILING DATE: 17-JUN-1991

RESULT 473

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US-11-101-244-159379
/ Sequence 159379, Application US/11101244
/ Publication No. US20050246794A1
/ GENERAL INFORMATION:
/ APPLICANT: Dharmacon, Inc.
/ APPLICANT: Khvorova, Anastasia
/ APPLICANT: Reynolds, Angela
/ APPLICANT: Leake, Devin
/ APPLICANT: Marshall, William
/ APPLICANT: Scaringe, Stephen
/ TITLE OF INVENTION: Functional and Hyperfunctional siRNA
/ FILE REFERENCE: 13499US
/ CURRENT APPLICATION NUMBER: US/11/101,244
/ PRIOR FILING DATE: 2005-04-07
/ PRIOR APPLICATION NUMBER: 60/502,050
/ PRIOR FILING DATE: 2003-09-10
/ PRIOR APPLICATION NUMBER: 60/426,137
/ PRIOR FILING DATE: 2002-11-14
/ NUMBER OF SEQ ID NOS: 1591911
/ SOFTWARE: Proprietary
/ SEQ ID NO 159379
/ LENGTH: 19
/ TYPE: RNA
/ ORGANISM: Homo sapiens
US-11-101-244-159379
```

```
Query Match      0.4%; Score 19; DB 1; Length 19;
Best Local Similarity 84.2%; Pred. No. 4.5e+02;
Matches 16; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
```

QY 845 GGAAGGTGAATCTCAAGC 863

DB 1 GGAAGGTGAATCTCAAGC 19

RESULT 474

```
US-11-101-244-159380
/ Sequence 159380, Application US/11101244
/ Publication No. US20050246794A1
/ GENERAL INFORMATION:
/ APPLICANT: Dharmacon, Inc.
/ APPLICANT: Khvorova, Anastasia
/ APPLICANT: Reynolds, Angela
/ APPLICANT: Leake, Devin
/ APPLICANT: Marshall, William
/ APPLICANT: Scaringe, Stephen
/ TITLE OF INVENTION: Functional and Hyperfunctional siRNA
/ FILE REFERENCE: 13499US
/ CURRENT APPLICATION NUMBER: US/11/101,244
/ PRIOR FILING DATE: 2005-04-07
/ PRIOR APPLICATION NUMBER: 60/502,050
/ PRIOR FILING DATE: 2003-09-10
/ PRIOR APPLICATION NUMBER: 60/426,137
/ PRIOR FILING DATE: 2002-11-14
/ NUMBER OF SEQ ID NOS: 1591911
/ SOFTWARE: Proprietary
/ SEQ ID NO 159380
/ LENGTH: 19
/ TYPE: RNA
/ ORGANISM: Homo sapiens
US-11-101-244-159380
```

```
Query Match      0.4%; Score 19; DB 1; Length 19;
Best Local Similarity 84.2%; Pred. No. 4.5e+02;
Matches 16; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
```

QY 504 GGAAGGTGAATCTCAAGC 522

DB 1 GGAAGGTGAATCTCAAGC 19

RESULT 475

```
US-11-101-244-159381
/ Sequence 159381, Application US/11101244
/ Publication No. US20050246794A1
/ GENERAL INFORMATION:
/ APPLICANT: Dharmacon, Inc.
/ APPLICANT: Khvorova, Anastasia
/ APPLICANT: Reynolds, Angela
/ APPLICANT: Leake, Devin
/ APPLICANT: Marshall, William
/ APPLICANT: Scaringe, Stephen
/ TITLE OF INVENTION: Functional and Hyperfunctional siRNA
/ FILE REFERENCE: 13499US
/ CURRENT APPLICATION NUMBER: US/11/101,244
/ PRIOR FILING DATE: 2005-04-07
/ PRIOR APPLICATION NUMBER: 60/502,050
/ PRIOR FILING DATE: 2003-09-10
/ PRIOR APPLICATION NUMBER: 60/426,137
/ PRIOR FILING DATE: 2002-11-14
/ NUMBER OF SEQ ID NOS: 1591911
/ SOFTWARE: Proprietary
/ SEQ ID NO 159381
/ LENGTH: 19
/ TYPE: RNA
/ ORGANISM: Homo sapiens
US-11-101-244-159381
```

```
Query Match      0.4%; Score 19; DB 1; Length 19;
Best Local Similarity 78.9%; Pred. No. 4.5e+02;
Matches 15; Conservative 4; Mismatches 0; Indels 0; Gaps 0;
```

QY 540 GCGCACTTCACAGCTGCT 558

DB 1 GCGCACTTCACAGCTGCT 19

*

RESULT 476

```
US-11-101-244-159382
/ Sequence 159382, Application US/11101244
/ Publication No. US20050246794A1
/ GENERAL INFORMATION:
/ APPLICANT: Dharmacon, Inc.
/ APPLICANT: Khvorova, Anastasia
/ APPLICANT: Reynolds, Angela
/ APPLICANT: Leake, Devin
/ APPLICANT: Marshall, William
/ APPLICANT: Scaringe, Stephen
/ TITLE OF INVENTION: Functional and Hyperfunctional siRNA
/ FILE REFERENCE: 13499US
/ CURRENT APPLICATION NUMBER: US/11/101,244
/ PRIOR FILING DATE: 2005-04-07
/ PRIOR APPLICATION NUMBER: 60/502,050
/ PRIOR FILING DATE: 2003-09-10
/ PRIOR APPLICATION NUMBER: 60/426,137
/ PRIOR FILING DATE: 2002-11-14
/ NUMBER OF SEQ ID NOS: 1591911
/ SOFTWARE: Proprietary
/ SEQ ID NO 159382
/ LENGTH: 19
/ TYPE: RNA
/ ORGANISM: Homo sapiens
US-11-101-244-159382
```

```
Query Match      0.4%; Score 19; DB 1; Length 19;
Best Local Similarity 89.5%; Pred. No. 4.5e+02;
Matches 17; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
```

QY 2063 TCAGAGCAGAGCATCG 2081

DB 1 TCAGAGCAGAGCATCG 19

RESULT 477

Patent No. 6559294
GENERAL INFORMATION:
APPLICANT: Griffiths, R.
TITLE OF INVENTION: Chlamydia pneumoniae genomic sequence and polypeptides, fragments
TITLE OF INVENTION: Chestnut and uses thereof, in particular for the diagnosis, prevention
FILE REFERENCE: 9710-003-999
CURRENT APPLICATION NUMBER: US/09/198,452A
NUMBER OF SEQ ID NOS: 6849
SEQ ID NO 2100
LENGTH: 20
TYPE: DNA
ORGANISM: Chlamydia pneumoniae
US-09-198-452A-2100

Query Match 0.4%; Score 16.4; DB 1; Length 20;
Best Local Similarity 94.4%; Pred. No. 28/
Matches 17; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 3134 AATGGAGATACGAG 3151
DB 19 AATGGAGATCCGAG 2

RESULT 12
US-09-696-791-72/C
Sequence 72, Application US/09696791
Patent No. 6770633
GENERAL INFORMATION:
APPLICANT: Robbing, Joan M.
TITLE OF INVENTION: RIBOZYME THERAPY FOR THE TREATMENT OF PROLIFERATIVE
TITLE OF INVENTION: SKIN AND EYE DISEASES
FILE REFERENCE: 480124.407
CURRENT APPLICATION NUMBER: US/09/696,791
CURRENT FILING DATE: 2000-10-25
NUMBER OF SEQ ID NOS: 4523
SOFTWARE: Patencin Ver. 2.0
SEQ ID NO 72
LENGTH: 19
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: Cdk1 ribozyme binding site
US-09-696-791-72

Query Match 0.4%; Score 16; DB 1; Length 19;
Best Local Similarity 100.0%; Pred. No. 29/
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 4188 CTTTGTATTAATA 4203
DB 19 CTTTGTATTAATA 4

* RESULT 13
US-09-696-791-73/C

Sequence 73, Application US/09696791
Patent No. 6770633
GENERAL INFORMATION:
APPLICANT: Robbing, Joan M.
TITLE OF INVENTION: RIBOZYME THERAPY FOR THE TREATMENT OF PROLIFERATIVE
TITLE OF INVENTION: SKIN AND EYE DISEASES
FILE REFERENCE: 480124.407
CURRENT APPLICATION NUMBER: US/09/696,791
CURRENT FILING DATE: 2000-10-25
NUMBER OF SEQ ID NOS: 4523
SOFTWARE: Patencin Ver. 2.0
SEQ ID NO 73
LENGTH: 19
TYPE: DNA

ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: Cdk1 ribozyme binding site
US-09-696-791-73

Query Match 0.4%; Score 16; DB 1; Length 19;
Best Local Similarity 100.0%; Pred. No. 29/
Matches 16; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 4188 CTTTGTATTAATA 4203
DB 17 CTTTGTATTAATA 2

RESULT 14
US-08-359-705B-22
Sequence 22, Application US/08359705B
Patent No. 5844092
GENERAL INFORMATION:
APPLICANT: Presta, Leonard G.
APPLICANT: Uffer, Roman
TITLE OF INVENTION: Human trk Receptors and Neurotrophic Factor Inhibitors
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 1 DNA Way
CITY: South San Francisco
STATE: California
COUNTRY: USA
ZIP: 94080
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatIn (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/359,705B
FILING DATE: 20-Dec-1994
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/286846
FILING DATE: 08/10/94
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/215139
FILING DATE: 03/18/94
ATTORNEY/AGENT INFORMATION:
NAME: Torchia, PhD., Timothy E.
REGISTRATION NUMBER: 36,700
REFERENCE/DOCKET NUMBER: P0873P2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-8674
TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO: 22:
SEQUENCE CHARACTERISTICS:
LENGTH: 19 base pairs
TYPE: Nucleic Acid
STRANDBESS: Single
TOPOLOGY: Linear
US-08-359-705B-22

Query Match 0.4%; Score 15.8; DB 1; Length 19;
Best Local Similarity 89.5%; Pred. No. 32/
Matches 17; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 3539 ACTCGAGCGAGGTG 3557
DB 1 ACCCGAGCGAGGTG 19

RESULT 15
US-08-286-846A-22
Sequence 22, Application US/08286846A

RESULT 1

US-09-949-016-46845

; Sequence 46845, Application US/09949016

; Patent No. 6812339

; GENERAL INFORMATION:

; APPLICANT: VENTER, J. Craig et al.

; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED

; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES
THEREOF

; FILE REFERENCE: CL001307

; CURRENT APPLICATION NUMBER: US/09/949,016

; CURRENT FILING DATE: 2000-04-14

; PRIOR APPLICATION NUMBER: 60/241,755

; PRIOR FILING DATE: 2000-10-20

; PRIOR APPLICATION NUMBER: 60/237,768

; PRIOR FILING DATE: 2000-10-03

; PRIOR APPLICATION NUMBER: 60/231,498

; PRIOR FILING DATE: 2000-09-08

; NUMBER OF SEQ ID NOS: 207012

; SOFTWARE: FastSEQ for Windows Version 4.0

; SEQ ID NO 46845

; LENGTH: 601

; TYPE: DNA

; ORGANISM: Human

US-09-949-016-46845

Query Match 100.0%; Score 20; DB 3; Length 601;

Best Local Similarity 100.0%; Pred. No. 0.028;

Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATGGAGGCCTCGCTCAGAAA 20

Db 191 ATGGAGGCCTCGCTCAGAAA 210